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FINAL INTERIM REMEDIAL ACTION COMPLETION REPORT OPERABLE UNIT 13 SITES 8
AND 24 RIFLE RANGE DISPOSAL AREA AND DDT MIXING AREA REVSION 2 NAS
PENSACOLA FL
9/1/2014
RESOLUTION CONSULTANTS

**FINAL
INTERIM REMEDIAL ACTION COMPLETION REPORT
OPERABLE UNIT 13 — SITES 8 AND 24
RIFLE RANGE DISPOSAL AREA AND DDT MIXING AREA**

**NAVAL AIR STATION PENSACOLA
PENSACOLA, FLORIDA**

Revision Number: 2

Prepared for:



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**Contract Number: N62470-11-D-8013
CTO JM40**

September 2014

FLORIDA PROFESSIONAL GEOLOGIST SEAL

I have reviewed and approve this Interim Remedial Action Completion Report for Groundwater at Naval Air Station Pensacola Operable Unit 13, Sites 8 and 24, and seal it in accordance with Chapter 492 of the Florida Statutes. In sealing this document, I certify the geological information contained in it is true to the best of my knowledge and the geological methods and procedures included herein are consistent with currently accepted geological practices.

Name: Brian E. Caldwell

License Number: 1330

State: Florida

Brian E Caldwell

Signature:

Sept 17 2014

Date:

FLORIDA PROFESSIONAL ENGINEER SEAL

I am registered to practice engineering by the Florida State Board of Professional Examiners. I certify, under penalty of law, that this Interim Remedial Action Completion Report for Groundwater at Naval Air Station Pensacola Operable Unit 13, Sites 8 and 24, was prepared in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. To the best of my knowledge and belief, the information submitted is true, accurate, and complete, and the contents of this document are consistent with currently accepted engineering practices. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name: David A. Myers
License Number: 66483
State: Florida


Signature:

09/17/2014
Date:



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Abbreviations and Acronyms

µg/L	Microgram per Liter
ARAR	Applicable or Relevant and Appropriate Requirement
bgs	below ground surface
BRA	Baseline Risk Assessment
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CLEAN	Comprehensive Long-Term Environmental Action Navy
COC	Chemical of Concern
CTO	Contract Task Order
DDT	Dichlorodiphenyltrichloroethane
DoD	Department of Defense
FDEP	Florida Department of Environmental Protection
FFA	Federal Facilities Agreement
IRA	Interim Removal Action
I-RACR	Interim Remedial Action Completion Report
LTM	Long-term Monitoring
LUC	Land Use Control
LUCIP	Land Use Control Implementation Plan
msl	Mean Sea Level
NA	Not Analyzed
NAS	Naval Air Station
NPL	National Priorities List
NS	Not Sampled
NTTC	Navy Technical Training Center
OU	Operable Unit
PP	Proposed Plan
ppb	Part per Billion
PWC	Public Works Center
RAB	Restoration Advisory Board
RAO	Remedial Action Objective
RG	Remedial Goal
RI	Remedial Investigation
ROD	Record of Decision
U.S. EPA	United States Environmental Protection Agency
VOC	Volatile Organic Compound

1.0 OVERVIEW

1.1 Introduction and Purpose

This Interim Remedial Action Completion Report (I-RACR) documents that the remedy for groundwater has been constructed and is in place and operating successfully at Operable Unit 13 (OU 13), Sites 8 (Rifle Range Disposal Area) and 24 (dichlorodiphenyltrichloroethane (DDT) Mixing Area), at Naval Air Station (NAS) Pensacola in Pensacola, Escambia County, Florida (Figure 1-1). Resolution Consultants has prepared this I-RACR for groundwater under Contract No. N62470-11-D-8013, Comprehensive Long-term Environmental Action Navy (CLEAN), Contract Task Order (CTO) JM40 in accordance with Department of Defense (DoD) and United States Environmental Protection Agency (U.S. EPA) Joint Guidance entitled *Recommended Streamlined Site Closeout and National Priority List (NPL) Deletion Process for DoD Facilities* (DoD/U.S. EPA 2006).

The Record of Decision (ROD) for NAS Pensacola OU 13 was issued by the Navy and U.S. EPA on 5 October 2006. The Florida Department of Environmental Protection (FDEP) concurred with the ROD on 30 September 2006. The goals of the remedies selected for the sources of contamination at OU 13 are to protect human health and the environment by eliminating, reducing, or controlling hazards posed by the site and to meet ARARs. The selected remedy includes no action for soil and groundwater monitoring (to ensure natural attenuation is occurring) in conjunction with Land Use Controls (LUCs) for groundwater at Sites 8 and 24 (TetraTech 2006).

The purpose of this I-RACR is to document that the Remedy-In-Place milestone (i.e., construction is complete) has been achieved for groundwater. This I-RACR also documents that the following criteria have been met:

- The remedy is operating as planned to meet Remedial Action Objectives (RAOs) and remedial goals stated in the ROD will be met in the future.
- LUCs are in place and are reviewed annually.
- Five-Year reviews are being completed.
- The site is protective of human health and the environment.

Groundwater monitoring activities and results will be presented in Annual Groundwater Monitoring Reports. LUC inspections will be documented in Annual LUC Inspection Reports.

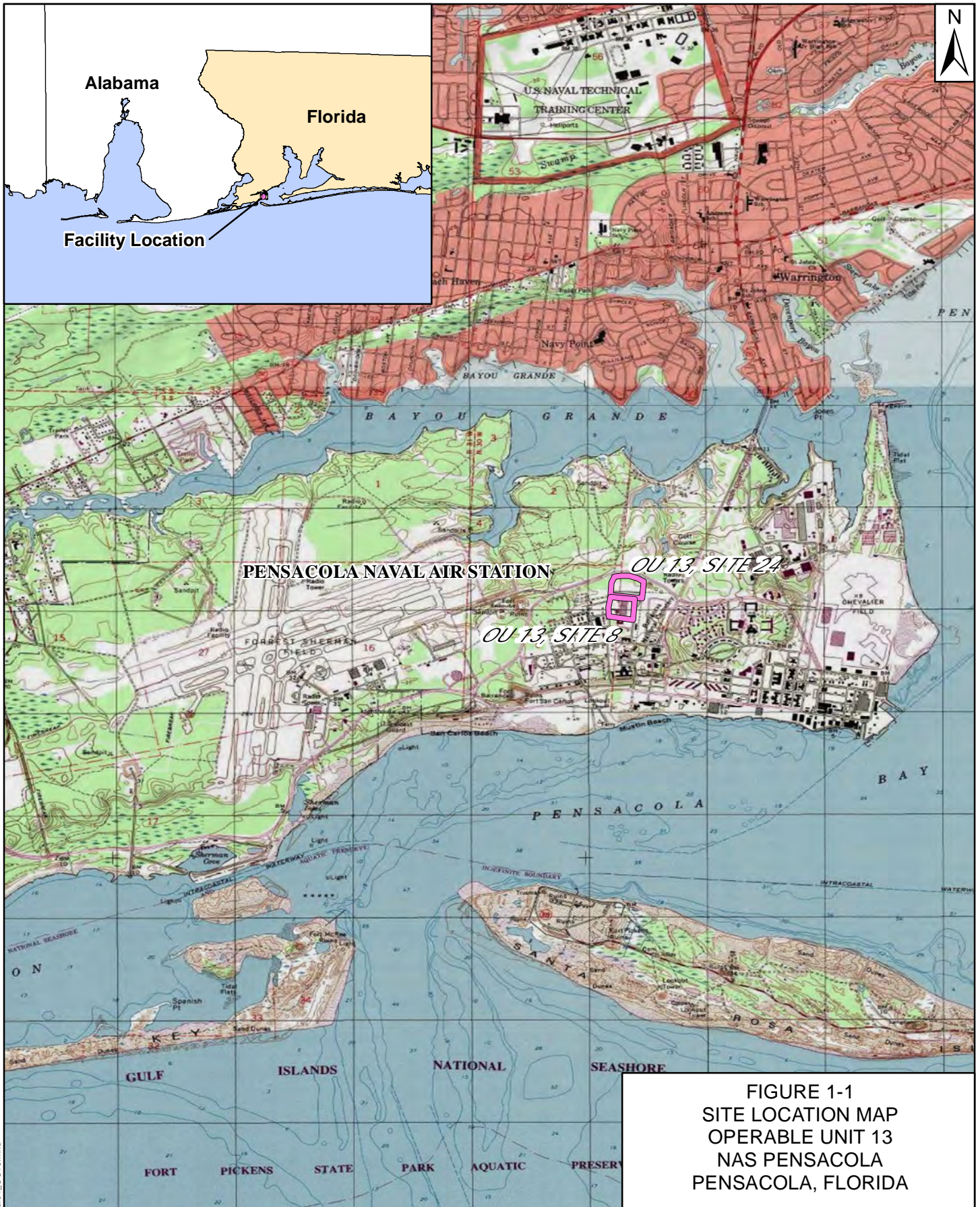


FIGURE 1-1
SITE LOCATION MAP
OPERABLE UNIT 13
NAS PENSACOLA
PENSACOLA, FLORIDA

Legend

 Site Boundary

0 0.25 0.5 0.75 1
Miles

Basemap Sources: Esri, DeLorme, NAVTEQ, USGS, Intermap, iPC, NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), TomTom, 2013, USA Topo Maps

REQUESTED BY: A. BAILEY

DRAWN BY: A. ZIMMERMAN

Date: 4/8/2013

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1.2 NAS Pensacola Background

1.2.1 History and Physical Setting

The United States Navy has maintained a presence in the Pensacola area since 1825 when a Navy yard was established on Pensacola Bay. Between 1828 and 1835, the Navy acquired approximately 2,300 acres as operations expanded. Several natural disasters in the early 1900s destroyed the yard and forced it into maintenance status in 1911. Three years later, the Navy's first permanent air station was established on the site of the old Navy yard.

The current 5,800-acre NAS Pensacola facility is on a peninsula bordered to the south by Pensacola Bay and north by Bayou Grande (Figure 1-1). The terrain is generally flat with rolling undulations. Undeveloped areas, particular on the west side of the facility, are mostly wooded with pines and hardwoods, with intertidal marshes and salt-tolerant vegetation near the shores; the more developed south-central and eastern portions of the facility contain less native vegetation, especially in training and industrial complexes and on the sprawling A.C. Read Golf Course. The subtropical climate averages 60 inches of rainfall per year, some coming in heavy downpours and occasional hurricanes. The shallow geology consists of sand and silty sand, supporting a shallow, unconfined, highly transmissive surficial aquifer, in which shallow groundwater flow largely mimics topography (EnSafe 1997).

1.2.2 Mission

The official mission of NAS Pensacola is to provide facilities, service, and support for the operation and maintenance of naval weapons and aircraft to operating forces of the Navy as designated by the Chief of Naval Operations. Some of the tasks required to accomplish this mission include operation of fuel storage facilities, performance of aircraft maintenance, maintenance and operation of engine repair facilities and test cells for aircraft engines, and support of weapon systems.

1.2.3 Environmental Background

Because of environmental investigation activities initiated by the Navy in 1983, 29 potential sources of contamination were identified as needing additional investigation. In December 1989, the base was placed on the NPL. The Federal Facilities Agreement (FFA), signed in October 1990, outlined the regulatory path to be followed at NAS Pensacola. NAS Pensacola must complete not only the regulatory obligations associated with its NPL listing, but it also must satisfy the ongoing requirement of an environmental Resource Conservation and Recovery Act permit issued in 1988.

1.3 OU 13 Background

One of the OUs identified as part of the NPL designation is OU13 which is comprised of Site 8 (Rifle Range Disposal Area) and Site 24 (DDT Mixing Area). OU 13 borders the eastern side of John H. Tower Road and is located southeast of the intersection of John H. Tower and Taylor Roads at NAS Pensacola (Figure 1-2). The OU is in an industrialized portion of NAS Pensacola.

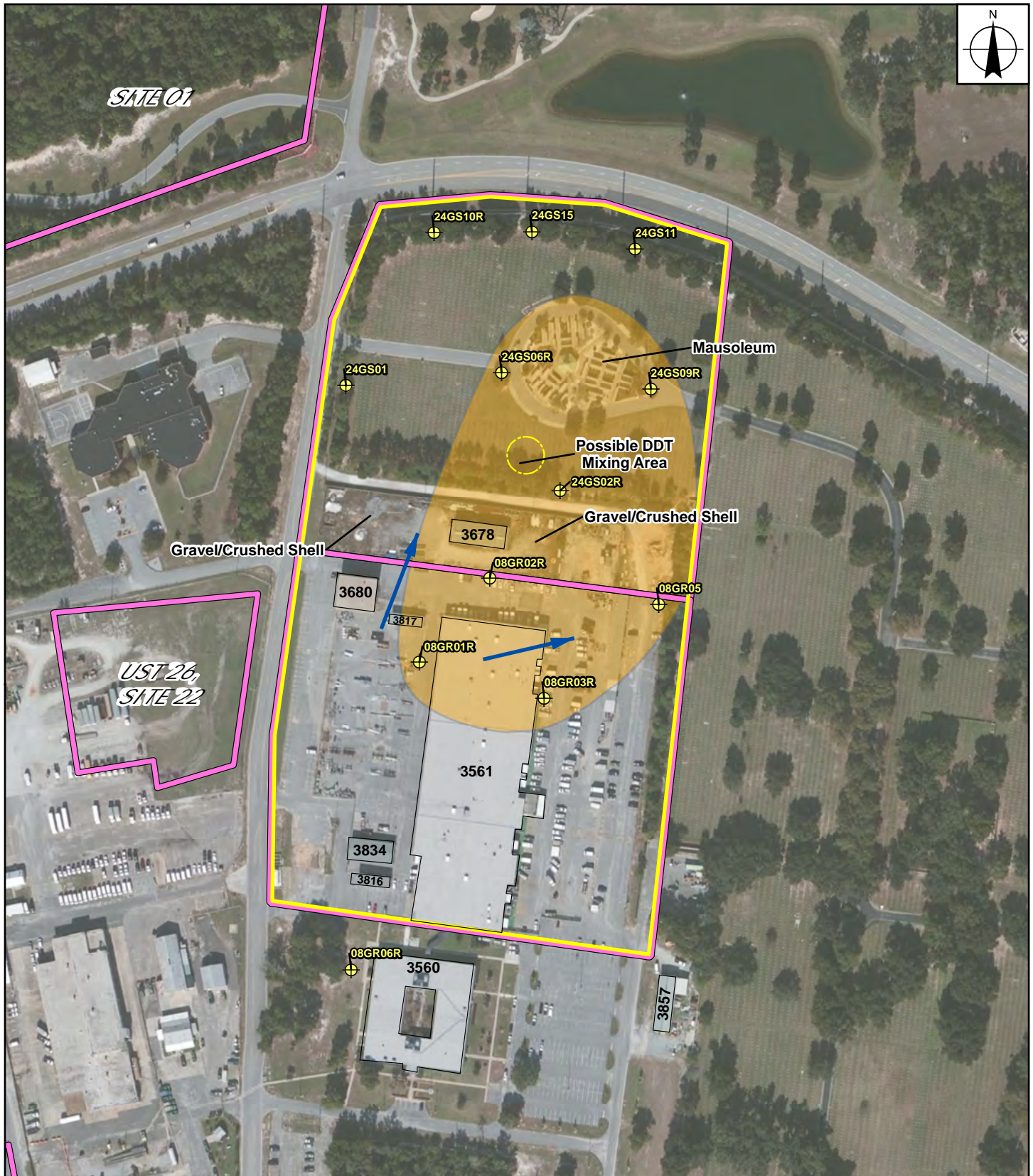
Site 8






Site 8, shown in Figure 1-2, is an approximate 650- by 720-foot area currently occupied by Building 3561, which houses the NAS Pensacola Public Works Center (PWC) Maintenance/Material Department. An extensive asphalt-paved area surrounds Building 3561 to the north, east, and west, covering nearly all land surface. The PWC stores building materials on the paved area west of the building.

Various solid wastes and dry refuse were reportedly placed in trenches and burned at Site 8 during the late 1950s and early 1960s. Aerial photographs and maps from the 1950s and 1960s show a rifle range at Building 3561's current location. Earlier aerial photographs show an excavation at the northern end of the rifle range, and later photographs show the excavated area as overgrown with vegetation. Most of the excavation area observed in earlier photographs is currently covered by Building 3561 and surrounding paved area, which were constructed during the mid-1970s. Facility personnel reported waste or residue was not identified during the building's construction (NEESA 1983). Building 3561 was constructed in the mid-1970s and is first visible in aerial photographs from April 1976. During most of the 1980s, a limited portion of Building 3561 was used as a pesticide storage and equipment rinsing area. A tank wash rack rinsing area was constructed in March 1981 midway along Building 3561's eastern side to contain and collect pesticide equipment wash water and rinsate. Wastewater from the wash rack was discharged to the sanitary sewer system. Base pest control operations were moved from Building 3561 to their current location at Building 1538 in the early 1990s (NEESA 1983; Tetra Tech 2006).

Other buildings within the Site 8 area include:

- Building 3680, Hazardous Material Storage Building
- Building 3817, Gas Bottle Storage Shed
- Building 3834, Material Storage
- Building 3816, Lumber Storage Shed



-  Well Locations
-  Groundwater Flow Direction
-  LUC Boundary
-  Site Boundary
-  Metals Groundwater Plume

0 250 500
Feet

FIGURE 1-2
SITE MAP
OPERABLE UNIT 13
NAS PENSACOLA
PENSACOLA, FLORIDA



REQUESTED BY: P. JOBMANN

DATE: 8/29/2014

DRAWN BY: B. LIPSCOMB

TASK ORDER NUMBER: XXXX

Site 24

Site 24, shown in Figure 1-2, is immediately north of Building 3561, and is part of the Barrancas National Cemetery and contain graves and a mausoleum. However, the fenced storage area around Building 3678, in Site 24's southern portion, has a gravel/crushed shell land surface.

From the early 1950s until the early 1960s, Site 24 was used to mix DDT with diesel fuel for mosquito control. Reportedly, DDT was spilled in the mixing area during transfer from drums to spray tanks, and may have contaminated local soil and groundwater. DDT was aerially applied for at least 10 years to control mosquito outbreaks. In later years, DDT was applied by a fogger machine. It is estimated that up to 20 gallons of diesel/DDT solution may have been spilled during the years of operation at the site (NEESA 1983). The fenced storage area north of Building 3561 was developed during the mid-1980s and the PWC storage building was constructed inside the fenced area prior to November 1989. Cemetery personnel have reported finding buried metal, rubber, and plastic aircraft parts during excavation along Site 24's eastern boundary (Tetra Tech 2006).

A water supply well (NAS Pensacola Well No. 1) that is no longer used is located upgradient of the combined site area, approximately 0.3 miles to the southeast; potable water is currently obtained from Navy Technical Training Center (NTTC) Corry Station. The NAS Pensacola Well No. 1 is screened in the main producing zone beneath the low permeability zone, which separates it from the surficial aquifer. Impacts to the groundwater of the main producing zone have not been identified at NAS Pensacola.

OU 13 Investigation Findings

Analytical data generated by investigations revealed the presence of Volatile organic compounds (VOCs) and inorganics in groundwater at OU 13 above their standards. Therefore, a baseline risk assessment (BRA) was conducted for OU 13 during the remedial investigation (RI) to assess the chemicals of concern (COCs) and the potential for unacceptable risk to human health and environment with regard to specific land use scenarios (EnSafe 1997). The BRA presented unacceptable risks for groundwater at Site 8 and Site 24.

As a result of the hazard presented by potential exposure to the identified contaminants, CH2M Hill conducted an Interim Removal Action (IRA) at OU 13 from 28 June 2004 to 25 August 2005. The results of the source removal action are described in the *Interim Removal Action Report, Excavation of Contaminated Soil at Operable Unit 13, Site 8* (CH2M Hill 2004).



The extent of groundwater contamination driving unacceptable excess risk at Sites 8 and 24 is limited. Unacceptable excess risk to human health should also be qualified based on exposure potential to the contaminated groundwater at Sites 8 and 24. The shallow groundwater is not currently used as a potable water source due to its poor ambient quality. The Navy provides potable water to NAS Pensacola from NTTC Corry Station, which is approximately 3 miles north of NAS Pensacola on the northern (opposite) side of Bayou Grande. These two factors greatly reduce exposure to contaminated groundwater at Sites 8 and 24.

2.0 REMEDIAL ACTION OBJECTIVES

The hazards presented by potential exposure to the identified contaminants at OU 13 resulted in the performance of a BRA that was conducted during the RI (EnSafe 1997). Because the IRA eliminated the unacceptable risk to human health and the environment and the leachability risk identified in the BRA for the soil, RAOs were only developed for groundwater. These RAOs are presented on Table 2-1.

Table 2-1 OU 13 Groundwater Remedial Action Objectives Naval Air Station Pensacola Pensacola, Florida			
Medium	COCs	Remedial Goals µg/L	Remedial Action Objectives
Groundwater	Antimony	6	Monitor groundwater to ensure COCs are not migrating offsite, compliance with remedial goals, and LUCs are maintained.
	Cadmium	5	
	Dieldrin	0.002	
	Heptachlor epoxide	0.2	
	Iron	1,707	
	Lead	15	
	Manganese	50	
	Methylene Chloride	5	
	Nickel	100	
	Thallium	3.8	
	Trichloroethene	3	
	Vinyl Chloride	1	

Notes:

COC = Chemical of Concern

LUC = Land Use Control

All remedial goals are defined in the *Record of Decision* (TetraTech 2006) and are in micrograms per liter (µg/L) or parts per billion (ppb).

The ROD specified the following remedial components to achieve the RAOs:

- 1) Performing groundwater monitoring in accordance with the Groundwater Monitoring Plan (Tetra Tech 2008) to ensure the COCs are not moving offsite and to monitor progress towards achieving compliance with the remedial goals (see Table 2-1).
- 2) Implementing LUCs to restrict use of groundwater from the surficial zone of the Sand and Gravel aquifer underlying the site. LUC implementation plans are in Appendix C of the *NAS Pensacola Base Master Plan* (NAS Pensacola 2009).
- 3) Reviewing LUCs on groundwater annually to ensure they are being complied with and certifying the controls remain in place or that they should be modified to reflect changing site conditions. Changes to the institutions control will not be made without proper written notification and approval by U.S. EPA and FDEP.



Even though preservation of the existing and future groundwater monitoring wells is not mentioned as a specific RAO within the approved ROD, maintaining the site's existing and future groundwater monitoring wells is essential to the remedy. Monitoring well integrity and fitness are reviewed during ongoing annual long-term monitoring (LTM) groundwater sampling and as part of facility-wide well inventories. In the event a well is damaged or cannot be found, U.S. EPA and FDEP will be notified of the deficiency and provide direction for continued monitoring. As agreed, the well will be repaired, replaced or abandoned depending on the utility and damage to the monitoring well.

3.0 REMEDIAL ACTIONS

The Groundwater Monitoring Plan was approved and groundwater monitoring was initiated (TetraTech 2008). In accordance with the monitoring plan, groundwater samples were collected semi-annually from December 2007 through October 2010 from twelve monitoring wells and analyzed for groundwater COCs established for OU 13 in the ROD (Figure 1-2; Table 2-1). These COCs are antimony, cadmium, dieldrin, heptachlor epoxide, iron, lead, manganese, methylene chloride nickel, thallium, trichloroethene, and vinyl chloride. A Groundwater Monitoring Plan was completed (TetraTech 2008), and groundwater monitoring has occurred as part of the long-term monitoring program for OU 13.

Aerostar conducted groundwater sampling activities from November 2007 to October 2011. Groundwater monitoring was completed semi-annually from 2007 to 2010, but was reduced to annually in 2011 in accordance with the approved *Groundwater Monitoring Plan*. Aerostar recommended that VOC and pesticide sampling and analyses cease in the *Annual Groundwater Monitoring Report* submitted in April 2012. Electronic mail correspondence from U.S. EPA in April 2012 and written correspondence from FDEP in September 2012 approved the deletion of pesticides and VOCs and reduced the metals analysis to antimony, cadmium, iron, and manganese.

Solutions-IES was subsequently contracted in 2012 to perform long-term groundwater monitoring. Solutions-IES performed groundwater sampling events in October 2012 and October 2013 for antimony, cadmium, iron, and manganese (Solutions-IES 2013; Solutions-IES 2014). Correspondence with the U.S. EPA in March 2013 and the FDEP in December 2013 approved the modifications to the monitoring program recommended in the report presenting the results of the October 2012 monitoring event (Solutions-IES 2013); however, FDEP approval was not received prior to the October 2013 monitoring event so the modifications were not incorporated in the monitoring event. The recommendations were restated in the 2013 Monitoring Report, and U.S. EPA no longer agreed with all of the recommendations. The discrepancy and changes to the Groundwater Monitoring Plan will be addressed as part of the LTM program.

Table 3-1 Groundwater Monitoring Program Operable Unit 13 Naval Air Station Pensacola, Pensacola, Florida				
Well Identification	Parameters			
	Antimony	Cadmium	Iron	Manganese
08GR01R		X	X	X
08GR02R	X	X	X	X
08GR03R		X	X	X

Table 3-1 Groundwater Monitoring Program Operable Unit 13 Naval Air Station Pensacola, Pensacola, Florida				
Well Identification	Parameters			
	Antimony	Cadmium	Iron	Manganese
08GR05	X	X	X	X
08GR06R			X	X
24GS01	X	X	X	X
24GS02R		X	X	X
24GS06R	X	X	X	
24GS09R	X	X	X	X
24GS10R	X		X	X
24GS11	X		X	X
24GS15	X		X	X

The current U.S. EPA and FDEP approved groundwater monitoring program is presented in Table 3-1 below:

The LUC RD outlining the site-specific land use control implementation plan (LUCIP) was completed in 2008 and complies with the agreement between the Navy, U.S. EPA, and FDEP (TetraTech 2008). Groundwater use of the surficial zone of the Sand and Gravel Aquifer underlying the OU 13 site boundary is prohibited. The OU 13 LUCIP is in Appendix C of the *NAS Pensacola Base Master Plan* (NAS Pensacola 2009). The Navy conducts annual reviews of the LUCs and certifies that the controls remain in place and are effective or if the controls should be modified to reflect changing site conditions. The *2013 Annual Land Use Control Report* is provided in Appendix A. Changes to the LUCs will not be made without proper written notification and approval by U.S. EPA and FDEP. These reporting and certification requirements for the LUCs are incorporated into the *Land Use Control Assurance Plan* between the Navy, U.S. EPA, and FDEP.

4.0 DEMONSTRATION TOWARDS COMPLETION

This I-RACR for groundwater is intended to demonstrate the implementation of the specific ROD remedial components to date, not to demonstrate completion of the remedial actions. Demonstration toward attainment of the remedial objectives for groundwater through implementation of LUCs and installation and sampling of monitoring wells is made through comparison of the RAOs for OU 13 to the results of the Interim Remedial Action and is presented on Table 4-1. Table 4-2 summarizes monitoring well construction, and Table 4-3 presents groundwater results for the long-term monitoring (LTM). Tables 4-2 and 4-3 are provided at the back of this document. Data analyses, including review and revision of the conceptual site model, trend analyses, and any monitoring plans will be included in LTM Reports.

Based on the results of the October 2013 event, concentrations of antimony and cadmium in wells that exceeded the RGs have remained relatively stable since 2007. Concentrations of iron in 24GS02R have fluctuated significantly since 2007. Iron in 24GS10R has shown a decreasing trend since 2010, but increased in October 2013. Manganese concentrations have decreased in 08GR01R and 08GR02R since 2008 and 2009, respectively. However, manganese concentrations in 24GS01 and 24GS02R have generally increased since 2008 (Solutions-IES 2014).

Table 4-1 Demonstration Towards Attainment of RAOs Operable Unit 13 Naval Air Station Pensacola, Pensacola, Florida	
Remedial Action Objectives	Interim Remedial Actions
Monitor groundwater to ensure COCs are not migrating offsite, achieving compliance with remedial goals and LUCs are maintained.	<ul style="list-style-type: none"> The Groundwater Monitoring Plan for OU 13 has been approved and monitoring to ensure that the COCs are not moving off-site and for compliance with remedial goals is being conducted. The OU 13 groundwater monitoring results are documented in Annual Reports. Natural attenuation appears to be occurring and there is no evidence of contaminant migration offsite. This I-RACR addresses ROD remedial component 1 listed in Section 2.
	<ul style="list-style-type: none"> LUCs have been implemented as specified in the ROD. A LUCIP was prepared and restricts the use of groundwater from the surficial zone of the Sand and Gravel Aquifer (TetraTech 2008). The OU 13 LUCIP is in Appendix C of the <i>NAS Pensacola Base Master Plan</i> (NAS Pensacola 2009). This I-RACR addresses ROD remedial components 2 and 3 listed in Section 2.
	<ul style="list-style-type: none"> In accordance with the Site Management Plan and the NAS Pensacola FFA, the LUC RD also contains LUC implementation and maintenance actions, and periodic inspections by the U.S. EPA and FDEP. The Navy is responsible for implementing, maintaining, reporting on, and enforcing the LUCs. The LUCs will be maintained until the concentrations of hazardous substances in the groundwater are at such levels to allow unrestricted use and exposure. This I-RACR addresses ROD remedial components 2 and 3 listed in Section 2.

Notes:

COC = Chemical of Concern
LUC = Land Use Control
OU = Operable Unit\
ROD = Record of Decision
LUCIP = Land Use Control Implementation Plan
FFA = Federal Facilities Agreement

Table 4-2 Monitoring Well Construction Details Operable Unit 13, Sites 8 and 24 NAS Pensacola, Florida			
Monitoring Well ID	Screened Interval (feet bgs)	Total Depth (feet bgs)	Top of Casing (feet msl)
Shallow Monitoring Wells			
08GR01R	8.9-18.90	18.90	27.56
08GR02R	10.00-20.00	20.00	27.74
08GR034	8.97-18.97	18.97	28.02
08GR05	9.60-19.60	19.60	28.15
08GR06R	10.00-20.00	20.00	26.95
24GS01	10.00-20.00	20.00	25.22
24GS02R	9.00-19.00	19.00	25.77
24GS06R	9.35-19.35	19.35	27.76
24GS09R	9.45-19.45	19.45	26.67
24GS10R	6.72-16.72	16.72	25.52
24GS11	6.85-16.85	16.85	24.65
24GS15	5.35-10.35	10.35	24.42

Notes:

bgs = Below ground surface
msl = Mean sea level
btoc = Below top of casing
All monitoring wells are 2-inch diameter.

<p>Table 4-3 Detected Concentrations of COCs in Groundwater Operable Unit 13 Naval Air Station Pensacola, Pensacola, Florida</p>													
Monitoring Well ID	Date	Antimony	Cadmium	Dieldrin	Heptachlor Epoxide	Iron	Lead	Manganese	Methylene Chloride	Nickel	Thallium	Trichloroethene	Vinyl Chloride
	RG ⁽¹⁾ (µg/L)	6	5	0.002	0.2	1707	15	50	5	100	3.8	3	1
08GR01R													
	Dec-07	25 U	1.5 I	0.0026 I	0.0048 U	2600	4 U	360	1 U	10 U	1.5 U	0.5 U	0.5 U
	Apr-08	6.3 V	4.3 I	0.0025 U	0.0049 U	5800	4 U	800	1 U	10 U	1 U	0.57 I	0.5 U
	Oct-08	1.1 IV	8.1	0.0023 U	0.0046 U	3500	4 U	600	1 U	10 U	0.55 U	0.82 I	0.5 U
	Mar-09	1.5 IV	13	0.0024 U	0.0048 U	5600	4 U	500	1 U	10 U	0.55 U	0.5 U	0.5 U
	Oct-09	2 U	9.7	0.0025 U	0.005 U	2600	4 U	350	1 U	10 U	0.25 U	0.5 U	0.5 U
	Mar-10	2 U	2.6 I	0.0011 U	0.0003 U	4700	4 U	300	1.5 I	10 U	0.25 U	2.7 I	0.5 U
	Oct-10	4.1 U	12.2	0.0011 U	0.0003 U	2572	4.7 U	310	1.27 U	6.5 I	6.5 I	1.36	0.192 U
	Oct-11	3 U	16.4	0.00177 U	0.00375 U	141 I	0.0434 U	133	0.75 U	2.26 I	0.25 I	0.65 I	0.31 U
	Oct-12	5.4 I	11	NA	NA	1550	NA	202	NA	NA	NA	NA	NA
	Oct-13	3.6 I	6.5	NA	NA	1500	NA	266	NA	NA	NA	NA	NA
08GR02R													
	Dec-07	25 U	2.3 I	0.0024 U	0.0048 U	96 I	4 U	130	1 U	10 U	1.5 U	0.5 U	0.5 U
	Apr-08	4 IV	29	0.0024 U	0.0048 U	6000	4 U	92	1 U	10 U	1 U	0.5 U	0.5 U
	Oct-08	2.9 V	18	0.0025 U	0.0049 U	230	4 U	12	1 U	10 U	0.55 U	0.5 U	0.5 U
	Mar-09	1.3 IV	43	0.0025 U	0.0049 U	4700	4 U	810	1 U	10 U	0.55 U	0.5 U	0.5 U
	Oct-09	2 U	39	0.0024 U	0.0048 U	2700	4 U	580	1 U	10 U	0.25 U	0.5 U	0.5 U
	Mar-10	3.8 I	19	0.0011 U	0.0003 U	680	4 U	120	1.8 I	10 U	0.25 U	0.357 U	0.5 U
	Oct-10	4.1 U	37.5	0.0011 U	0.0003 U	177 I	4.7 U	337.7	1.27 U	13.4	5.4 I	0.098 U	0.192 U
	Oct-11	3 U	23.8	0.00365 U	0.0122 U	668	2.88 I	181	4.09 U	2.9	0.1	0.08 U	0.33 U
	Oct-12	2.7 I	27.6	NA	NA	1560	NA	119	NA	NA	NA	NA	NA
	Oct-13	5.5 I	18.8	NA	NA	97.7 I	NA	9.7 I	NA	NA	NA	NA	NA
08GR03R													
	Dec-07	0.25 U	5	0.0024 U	0.0048 U	450	4 U	120	1 U	10 U	1.5 U	0.5 U	0.5 U
	Apr-08	3.9 IV	8.9	0.0025 U	0.0049 U	1000	4 U	10 U	1 U	10 U	1 U	0.5 U	0.5 U
	Oct-08	2.6 V	4.7 I	0.0024 U	0.0048 U	2500	4 U	10 U	1 U	10 U	0.55 U	0.5 U	0.5 U
	Mar-09	1.7 IV	5.7	0.0024 U	0.0049 U	5300	4 U	49	1 U	10 U	0.55 U	0.5 U	0.5 U
	Oct-09	2 U	2.3 I	0.0024 U	0.0046 U	2700	4 U	44	1 U	10 U	0.25 U	0.5 U	0.5 U
	Mar-10	3.7 I	6.3	0.0011 U	0.0003 U	1900	4 U	14	1 I	10 U	0.25 U	0.5 U	0.5 U
	Oct-10	4.1 U	2.8 I	0.0011 U	0.0003 U	637.7	4.7 U	6.4 U	1.27 U	1.9 U	7 I	0.357 U	0.192 U
	Oct-11	3 U	0.96	0.00172 U	0.00364 U	470	0.58 I	3.77	0.75 U	0.344 U	0.05 I	0.39 U	0.31 U
	Oct-12	3.3 I	2.6 I	NA	NA	1430	NA	7.8 I	NA	NA	NA	NA	NA
	Oct-13	3.7 I	2.5 I	NA	NA	332	NA	7.2 I	NA	NA	NA	NA	NA
08GR05													
	Dec-07	0.25 U	12	0.0024 U	0.0048 U	190	4 U	10 U	1 U	10 U	1.5 U	0.5 U	0.5 U
	Apr-08	8.6 V	25	0.0025 U	0.0048 U	100	4 U	10 U	1 U	10 U	1 U	0.5 U	0.5 U
	Oct-08	5.2 V	8.4	0.0024 U	0.0048 U	150	4 U	17	1 U	10 U	0.55 U	0.5 U	0.5 U
	Mar-09	2.5 V	1.2 I	0.0024 U	0.0048 U	520	4 U	46	1 U	10 U	0.55 U	0.5 U	0.5 U
	Oct-09	2.9 I	1 U	0.0024 U	0.0048 U	97 I	4 U	53	1 U	10 U	0.25 U	0.5 U	0.5 U
	Mar-10	5.4	19	0.0011 U	0.0003 U	80 I	4 U	10 U	1.7 I	10 U	0.25 U	0.375 U	0.5 U
	Oct-10	4.6 I	76.2	0.0011 U	0.0003 U	32 U	4.7 U	6.4 U	ND	10.1	4.9 U	0.357 U	0.192 U
	Oct-11	3 U	0.42 I	0.00173 U	0.00367 U	106 I	0.0434 U	26.5	0.83 VI	5.72	0.0475 U	0.39 U	0.31 U
	Oct-12	3.7 I	12.2	NA	NA	45.1 I	NA	17.3	NA	NA	NA	NA	NA
	Oct-13	5.2 I	44.8	NA	NA	105 I	NA	64	NA	NA	NA	NA	NA



Table 4-3 Detected Concentrations of COCs in Groundwater Operable Unit 13 Naval Air Station Pensacola, Pensacola, Florida													
Monitoring Well ID	Date	Antimony	Cadmium	Dieldrin	Heptachlor Epoxide	Iron	Lead	Manganese	Methylene Chloride	Nickel	Thallium	Trichloroethene	Vinyl Chloride
	RG ⁽¹⁾ (µg/L)	6	5	0.002	0.2	1707	15	50	5	100	3.8	3	1
08GR06R													
	Dec-07	25 U	1 U	0.0025 U	0.0049 U	3100	7	10 U	1 U	10 U	12 U	0.5 U	0.5 U
	Apr-08	3.9 IV	1 U	0.0025 U	0.0049 U	2600	4 U	10 U	1 U	10 U	1 U	0.5 U	0.5 U
	Oct-08	3.3 V	1 U	0.0023 U	0.0046 U	2200	4 U	10 U	1 U	10 U	0.55 U	0.5 U	0.5 U
	Mar-09	1.8 IV	1 U	0.0024 U	0.0048 U	2900	4.6 I	10 U	1 U	10 U	0.55 U	0.5 U	0.5 U
	Oct-09	2 U	1 U	0.0025 U	0.005 U	1100	4 U	10 U	1 U	10 U	0.25 U	0.5 U	0.5 U
	Mar-10	2.2 I	1 U	0.0011 U	0.0003 U	2600	6.7	10 U	1 I	10 U	0.25 U	0.5 U	0.5 U
	Oct-10	5.4 I	1.1 U	0.0011 U	0.0003 U	3124	4.7 U	6.4 I	1.27 U	3.5 I	4.9 U	0.357 U	0.192 U
	Oct-11	3 U	0.0614 U	0.00172 U	0.0364 U	1210	2.41	3.2	0.75 U	1.68 I	0.05 I	0.39 U	0.31 U
	Oct-12	2.8 I	0.5 U	NA	NA	465	NA	0.7 U	NA	NA	NA	NA	NA
	Oct-13	2.5 I	0.5 U	NA	NA	1880	NA	3.9 I	NA	NA	NA	NA	NA
	Nov-13	1.3 U	0.5 U	NA	NA	1610	NA	2.2 I	NA	NA	NA	NA	NA
24GS01													
	Dec-07	25 U	1 U	0.0024 U	0.0048 U	170	4 U	10 U	1 U	10 U	1.5 U	0.5 U	0.5 U
	Apr-08	7.7 V	1 U	0.0024 U	0.0048 U	210	4 U	10 U	1 U	10 U	1 U	0.5 U	0.5 U
	Oct-08	6.1 V	1 U	0.0024 U	0.0047 U	60 U	4 U	10 U	1 U	10 U	0.55 U	0.5 U	0.5 U
	Mar-09	4.1 V	1 U	0.0025 U	0.0049 U	410	4 U	11	1 U	10 U	0.55 U	0.5 U	0.5 U
	Oct-09	6.1	1 U	0.0025 U	0.0050 U	190	4 U	15	1 U	10 U	0.25 U	0.5 U	0.5 U
	Mar-10	7.6	1 U	0.0011 U	0.0003 U	100	4 U	10 U	1 U	10 U	0.25 U	0.5 U	0.5 U
	Oct-10	4.1 U	1.1 U	0.0011 U	0.0003 U	365.5	4.7 U	68.6	1.27 U	1.9 U	4.9 U	0.357 U	0.192 U
	Oct-11	3 U	0.0614 U	0.00179 U	0.00379 U	194	0.0434 U	141	0.75 U	0.344 U	0.0475 U	0.39 U	0.31 U
	Oct-12	5.8 I	0.5 U	NA	NA	1220	NA	53.0	NA	NA	NA	NA	NA
	Oct-13	5.1 I	0.5 U	NA	NA	1210	NA	30.6	NA	NA	NA	NA	NA
24GS02R													
	Dec-07	25 U	1 U	0.0025 U	0.005 U	9200	14	120	1 U	10 U	1.5 U	0.5 U	0.5 U
	Apr-08	2.8 IV	1 U	0.0024 U	0.0048 U	130	4 U	10 U	1 U	10 U	1 U	0.5 U	0.5 U
	Oct-08	1.4 IV	1 U	0.0023 U	0.0046 U	1100	4 U	10 U	1 U	10 U	0.55 U	0.5 U	0.5 U
	Mar-09	1.1 IV	1 U	0.0024 U	0.0048 U	4200	6.5	16	1 U	10 U	0.55 U	0.5 U	0.5 U
	Oct-09	2 U	1 U	0.0024 U	0.0048 U	120	4 U	10 U	1 U	10 U	0.25 U	0.5 U	0.5 U
	Mar-10	2 U	1 U	0.0012 I	0.0003 U	3800	8.7	19	1.3 I	10 U	0.25 U	0.5 U	0.5 U
	Oct-10	4.1 U	1.1 U	0.0011 U	0.0003 U	570	4.7 U	36.9	1.27 U	2.4 I	4.9 U	0.357 U	0.192 U
	Oct-11	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	Oct-12	1.3 U	0.5 U	NA	NA	4000	NA	205	NA	NA	NA	NA	NA
	Oct-13	1.3 U	0.5 U	NA	NA	3110	NA	50.4	NA	NA	NA	NA	NA

Table 4-3 Detected Concentrations of COCs in Groundwater Operable Unit 13 Naval Air Station Pensacola, Pensacola, Florida													
Monitoring Well ID	Date	Antimony	Cadmium	Dieldrin	Heptachlor Epoxide	Iron	Lead	Manganese	Methylene Chloride	Nickel	Thallium	Trichloroethene	Vinyl Chloride
	RG ⁽¹⁾ (µg/L)	6	5	0.002	0.2	1707	15	50	5	100	3.8	3	1
24GS06R													
	Dec-07	25 U	1 U	0.0025 U	0.0049 U	3300	77	230	1 U	10 U	1.5 U	0.5 U	0.5 U
	Apr-08	2.3 IV	1 U	0.0025 U	0.0049 U	560	4 U	13	1 U	10 U	1 U	0.5 U	0.5 U
	Oct-08	1.9 IV	1 U	0.0023 U	0.0047 U	170	4 U	10 U	1 U	10 U	0.55 U	0.5 U	0.5 U
	Mar-09	2 IV	1 U	0.0024 U	0.0049 U	430	4 U	10 U	1.1 I	10 U	0.55 U	0.5 U	0.5 U
	Oct-09	2.6 I	1 U	0.0025 U	0.0051 U	60 U	4 U	10 U	1 U	10 U	0.25 U	0.5 U	0.5 U
	Mar-10	2 U	1 U	0.0011 U	0.0003 U	190	4 U	10 U	1.2 I	10 U	0.25 U	0.5 U	0.5 U
	Oct-10	4.1 U	1.1 U	0.0011 U	0.0003 U	4373	8.1 I	22.1	1.27 U	5.4	4.9 U	0.357 U	0.192 U
	Oct-11	3 U	0.0614 U	0.00176 U	0.00373 U	159	0.22 I	1.86 I	0.75 U	0.344 U	0.0475 U	0.39 U	0.31 U
	Oct-12	2.5 I	0.5 U	NA	NA	704	NA	29.5	NA	NA	NA	NA	NA
	Oct-13	2.1 I	0.5 U	NA	NA	5170	NA	356	NA	NA	NA	NA	NA
	Nov-13	1.3 U	0.5 U	NA	NA	6000	NA	64.2	NA	NA	NA	NA	NA
24GS09R													
	Dec-07	54	1 U	0.0024 U	0.0048 U	4000	12	100	1 U	10 U	1.5 U	0.5 U	0.5 U
	Apr-08	44 V	1 U	0.0025 U	0.0049 U	1800	6	20	1 U	10 U	1 U	0.5 U	0.5 U
	Oct-08	54 V	1 U	0.0023 U	0.0047 U	370	4 U	10 U	1 U	10 U	0.55 U	0.5 U	0.5 U
	Mar-09	52 V	1 U	0.0023 U	0.0047 U	860	4 U	10 U	1 U	10 U	0.55 U	0.5 U	0.5 U
	Oct-09	60	1 U	0.0025 U	0.0049 U	70 I	4 U	10 U	1 U	10 U	0.25 U	0.5 U	0.5 U
	Mar-10	44	1 U	0.0011 U	0.0003 U	390	4 U	10 U	1 U	10 U	0.25 U	0.5 U	0.5 U
	Oct-10	39.3	1.1 U	0.0011 U	0.0003 U	68.8 I	4.7 U	6.4 U	1.27 U	1.9 I	5.8 I	0.357 U	0.192 U
	Oct-11	62.4	0.0614 U	0.00171 U	0.00362	583	0.99 I	2.2 I	0.83 VI	0.344 U	0.0475 U	0.39 U	0.31 U
	Oct-12	50.3	0.5 U	NA	NA	98.3 I	NA	1.4 I	NA	NA	NA	NA	NA
	Oct-13	38.9	0.5 U	NA	NA	136 I	NA	0.9 I	NA	NA	NA	NA	NA
24GS10R													
	Dec-07	25 U	1 U	0.0025 U	0.0049 U	60 U	4 U	40 U	1 U	10 U	1.5 U	0.5 U	0.5 U
	Apr-08	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	Oct-08	1.6 IV	1 U	0.0024 U	0.0047 U	980	4 U	10 U	1 U	10 U	0.55 U	0.5 U	0.5 U
	Mar-09	1.5 IV	1 U	0.0024 U	0.0049 U	340	4 U	10 U	1 U	10 U	0.55 U	0.5 U	0.5 U
	Oct-09	2 U	1 U	0.0024 U	0.0047 U	470	4 U	10 U	1 U	10 U	0.25 U	0.5 U	0.5 U
	Mar-10	2 U	1 U	0.0011 U	0.0003 U	3500	5 I	32	1 U	10 U	0.25 U	0.5 U	0.5 U
	Oct-10	4.1 U	1.1 U	0.0011 U	0.0003 U	2200	4.7 U	10 I	1.27 U	8.6 I	6.6 I	0.357 U	0.192 U
	Oct-11	3 U	0.0614 U	0.00174 U	0.00369 U	1630 J	0.94 I	6.46	0.75 U	0.77 I	0.35 I	0.39 U	0.31 U
	Oct-12	1.3 U	0.5 U	NA	NA	572	NA	6.6 I	NA	NA	NA	NA	NA
	Oct-13	3 I	0.5 U	NA	NA	1740	NA	13.3 I	NA	NA	NA	NA	NA
24GS11													
	Dec-07	25 U	1 U	0.0024 U	0.0048 U	8500	9.6	14	1 U	10 U	1.5 U	0.5 U	0.5 U
	Apr-08	2 U	1 U	0.0025 U	0.005 U	1500	4 U	10 U	1 U	10 U	1 U	0.5 U	0.5 U
	Oct-08	1.3 IV	1 U	0.0024 U	0.0048 U	5000	4.8 I	10 U	1 U	10 U	0.55 U	0.5 U	0.5 U
	Mar-09	0.7 IV	1 U	0.0024 U	0.0049 U	3500	4 I	10 U	1 U	10 U	0.55 U	0.5 U	0.5 U
	Oct-09	2 U	1 U	0.0024 U	0.0047 U	2800	4 U	10 U	1 U	10 U	0.25 U	0.5 U	0.5 U
	Mar-10	2 U	1 U	0.0011 U	0.0003 U	2300	4 U	10 U	1.6 I	10 U	0.25 U	0.5 U	0.5 U
	Oct-10	4.1 U	1 U	0.0011 U	0.0003 U	1699	4.7 U	17 I	1.27 U	1.9 U	4.9 U	0.357 U	0.192 U
	Oct-11	3 U	0.0614 U	0.00183	0.00387 U	792	0.54	2.84 I	0.75 VI	0.344 U	0.0475	0.39 U	0.31 U
	Oct-12	1.3 U	0.5 U	NA	NA	666	NA	4.4 I	NA	NA	NA	NA	NA
	Oct-13	1.3 U	0.5 U	NA	NA	1060	NA	4.9 I	NA	NA	NA	NA	NA



Table 4-3
Detected Concentrations of COCs in Groundwater
Operable Unit 13
Naval Air Station Pensacola, Pensacola, Florida

Monitoring Well ID	Date	Antimony	Cadmium	Dieldrin	Heptachlor Epoxide	Iron	Lead	Manganese	Methylene Chloride	Nickel	Thallium	Trichloroethene	Vinyl Chloride
	RG ⁽¹⁾ (µg/L)	6	5	0.002	0.2	1707	15	50	5	100	3.8	3	1
24GS15													
	Dec-07	25 U	1 U	0.0024 U	0.0048 U	1800	5	10 U	1 U	10 U	1.5 U	0.5 U	0.5 U
	Apr-08	2 U	1 U	0.0024 U	0.0048 U	230	4 U	10 U	1 U	10 U	1 U	0.5 U	0.5 U
	Oct-08	1 IV	1 U	0.0024 U	0.0049 U	330	4 U	10 U	1 U	10 U	0.55 U	0.5 U	0.5 U
	Mar-09	4.6 IV	1 U	0.0025 U	0.0049 U	370	4 U	10 U	1 U	10 U	0.55 U	0.5 U	0.5 U
	Oct-09	2 U	1 U	0.0024 U	0.0003 U	110	4 U	10 U	1 U	10 U	0.25 U	0.5 U	0.5 U
	Mar-10	2 U	1 U	0.0011 U	0.0048 U	1300	4 U	10 U	1 U	10 U	0.25 U	0.5 U	0.5 U
	Oct-10	4.1 U	1.1 U	0.0011 U	0.0003 U	94.6 I	4.7 U	6.4 U	1.27 U	1.9 U	4.9 U	0.357 U	0.192 U
	Oct-11	3 U	0.0614 U	0.00183 U	0.00387	77.2 I	0.0434 U	7.97	0.78 VI	2.38 I	0.0475 U	0.33 U	0.31 U
	Oct-12	1.3 U	0.5 U	NA	NA	61.9 I	NA	0.9 I	NA	NA	NA	NA	NA
	Oct-13	2.4 I	0.5 U	NA	NA	338	NA	6 I	NA	NA	NA	NA	NA

Notes:
All results are reported micrograms per liter (µg/L) or parts per billion (ppb)
RG = Remedial Goal
(1) = Remedial goals are defined in the Record of Decision (TetraTech 2006)
U = Analyte is below the detection limit
I = The reportable value is between the laboratory method detection limit and the laboratory practical quantification limit
V = Indicates the analyte was detected in both the sample and the associated method blank
NA = Not analyzed
NS = Not sampled
Results in **bold** exceed a RG

5.0 ONGOING ACTIVITIES

The Navy will continue to inform the U.S. EPA and FDEP of the post-ROD activities in accordance with the LUCIP and statutory Five-Year Reviews will be conducted to ensure the remedy continues to remain protective of human health and the environment. A groundwater monitoring plan has been approved by the U.S. EPA that specifies groundwater monitoring locations and frequency (Tetra Tech 2008). The groundwater monitoring will continue until a Five-Year Review concludes that the alternative has achieved continued attainment of the remedial goals and remains protective of human health and the environment. The LUCs will be maintained until groundwater contamination has been remediated and attained previously agreed upon remedial goals.

6.0 COMMUNITY RELATIONS

The Navy and U.S. EPA provide information regarding the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) activities at NAS Pensacola to the public through a community relations program, which includes a Restoration Advisory Board (RAB), public meetings, the Administrative Record file for the site, the information repository, and announcements published in local newspapers. The RAB was formed in 1995 and meets annually. This I-RACR for groundwater will be addressed in the next RAB meeting.

In accordance with Sections 113 and 117 of CERCLA, the Navy provided a public comment period from 1 July through 14 August 2005, for the OU 13 Proposed Plan (PP) detailing the preferred remedy for the site through a public notice that was placed in the *Pensacola News Journal* on 3 July 2005. This announcement encouraged public participation in the remedy selection and notified the public of the location and availability of applicable documents. Although the opportunity for a public meeting was provided, one was not requested. During the public comment period, no written questions or comments relative to the selected remedy were received by the Navy, U.S. EPA, or FDEP.

The PP, ROD, and pre-ROD investigation reports are available to the public in the information repository for the Administrative Record file maintained at:

Public Works Center
Attn: Mr. Greg Campbell, PE
Naval Air Station Pensacola
310 John Tower Road
Pensacola, Florida 32508
850-452-3131, extension 3007

Post-ROD documents are not maintained in the Administrative Record file but are available in the information repository at the above location.

7.0 CONCLUSION AND CERTIFICATION STATEMENT

The remedy for groundwater at OU 13, Sites 8 and 24 as described in the ROD has been constructed and is in place and operating successfully. I certify that this I-RACR for groundwater documents that the remedy is in place and demonstrates that all remedial actions have been taken to meet the RAOs.



Gregory Allen Campbell, P.E.

**Remedial Project Manager
Naval Air Station Pensacola**

9-17-14
Date

8.0 REFERENCES

- Aerostar. *Semi-Annual Groundwater Monitoring Report*, Sites 8 and 24, Naval Air Station Pensacola, Florida, March 2012.
- CH2M Hill. *Interim Removal Action Report*, Excavation of Contaminated Soil at OU 13, Site 8, Naval Air Station Pensacola, Pensacola, Florida. 2004.
- Department of Defense and U.S. Environmental Protection Agency. Recommended Streamlined Site Closeout and National Priorities List Deletion Process for Department of Defense Facilities. January 2006.
- EnSafe Inc. *Final Remedial Investigation Report — Operable Unit 13 — Sites 8 and 24*, Naval Air Station Pensacola, Florida. December 1997.
- FDEP. Approval of *Annual Groundwater Monitoring Report (October 2011 Sampling Event)*, Operable Unit 13, Site 8 and 24, Naval Air Station Pensacola, Florida. September 2012.
- *Approval of Draft Final Annual Groundwater Monitoring Report (October 2012 Sampling Event)*, Operable Unit 13, Site 8 and 24, Naval Air Station Pensacola, Florida. December 2013.
- Naval Air Station Pensacola. Naval Air Station Pensacola Base Master Plan. March 2009.
- *Annual Land Use Control Report — Naval Air Station Pensacola, Florida*. December 2013.
- Naval Energy and Environmental Support Activity. *Initial Assessment Study of Naval Air Station*, Pensacola, Pensacola, Florida. 1983.
- Solutions-IES. *Draft Final Annual Groundwater Monitoring Report*, Operable Unit 13 (Sites 8 and 24), Naval Air Station Pensacola, Pensacola, Escambia County, Florida. 2013.
- *Draft Annual Groundwater Monitoring Report, Operable Unit 13 (Sites 8 and 24)*, Naval Air Station Pensacola, Pensacola, Escambia County, Florida. 2014.



Tetra Tech. *Record of Decision (Revision 3), Operable Unit 13*, Naval Air Station Pensacola, Florida.

Prepared for Naval Facilities Engineering Command, Southeast, North Charleston, South Carolina. August 2006.

- Remedial Design for Land Use Controls and Groundwater Monitoring at Operable Unit 13, Site 8 — Rifle Range Disposal Area and Site 24 — DDT Mixing Area, Naval Air Station Pensacola, Florida. August 2008.
- *Groundwater Monitoring Plan at Operable Unit 13, Site 8 — Rifle Range Disposal Area and Site 24 — DDT Mixing Area*, Naval Air Station Pensacola, Florida. August 2008.

U.S. EPA. Electronic Mail from U.S. EPA Region 4 on *Annual Groundwater Monitoring Report, Operable Unit 13*, Naval Air Station Pensacola, Florida. April 16, 2012.

- Letter and Concurrence from U.S. EPA Region 4 on Draft Final Long-Term Monitoring Report, Operable Unit 13, Naval Air Station Pensacola, Florida. March 2013.

Appendix A
2013 Annual Land Use Control Report

Sites 8 and 24 (OU 13) Annual LUC Compliance Certificate

Naval Air Station Pensacola
FL9170024567

Property Owner: NAVAL AIR STATION PENSACOLA

Property Address: NAS PENSACOLA - PENSACOLA, FLORIDA

Is evaluation for all or a portion of the OU 13 property? _____

If evaluating only a portion of the site, attach a figure identifying the portion being evaluated.

This evaluation covers the period from **1 January** _____ through **31 December** _____.

Form shall be submitted by **1 March** of the year following the reporting period.

Certification Checklist

	In Compliance	Non-Compliance	See Comment
1) No groundwater being used for any purpose (unless previously approved by USEPA, FDEP, and the Navy).	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2) No tampering or damage to groundwater monitoring wells or remediation system(s).	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3) Any violations of these LUCs were reported within 10 days of discovery and an explanation provided of those actions taken or to be taken was provided within 10 days of notification.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

I, the undersigned, hereby certify that I am an authorized representative of the above named property owner and that the above described Land Use Controls have been complied with for the period noted. Alternately, any known deficiencies and owner's completed or planned actions to address such deficiencies are described in the attached Explanation of Deficiency(ies).


Signature - Greg Campbell (Navy)

12-3-13
Date


Signature - Patty Whittemore (Navy)

12/3/13
Date

Signature

Date

Signature

Date